

MODIS IOT Weekly Report

Mission Operations Days: 2000/302 to 2000/308

October 27, 2000 20:00:00 GMT to November 3, 2000 20:00:00 GMT

MODIS is now operating via B/Redundant-Side Components (Except the FDDI Port)

SMIR Itwk/Vdet Values have been set to 79/110 (respectively)

All Band/Detector Gains have returned to their Initial Launch Values

Terra Spacecraft and MODIS Instrument Status:

Terra (AM-1) is in Normal Mode

MODIS is in Science Mode

Blackbody	A Off; B On	(New) Nominal
Calibration Electronics	A Off; B On	(New) Nominal
Control Processor	A Off; B On	(New) Nominal
Door: Nadir	Unlatched, open	Nominal
Space View	Unlatched, open	Nominal
Solar Diffuser	Unlatched, closed	Nominal
FDDI Formatter	A Off; B On	(New) Nominal
FDDI Port	A On; B Off	(New) Nominal
FIFO Memory	1 & 2 Off; 3 & 4 On	(New) Nominal
Format Processor	A Off; B On	(New) Nominal
Power Supply: 1	Off	(New) Nominal
2	On	(New) Nominal
PV FPAs: VIS	A Off; B On	(New) Nominal
NIR	A Off; B On	(New) Nominal
SMIR	A Off; B On	(New) Nominal
LWIR	A Off; B On	(New) Nominal
PC FPA: LWIR	A Off; B On	(New) Nominal
Radiative Cooler:		
Outgas Heaters	All Off	Nominal
LWIR FPA Heater	On	Nominal
SMIR FPA Heater	Off	Nominal
Scan Assembly	A Off; B On	(New) Nominal
SDSM	Off	Nominal
SRCA	Off	Nominal
Survival Heaters: PS1	Enabled	Nominal
PS2	Enabled	Nominal
Timing Generator	A Off; B On	(New) Nominal
Flight Software	Rev BD + 2 patches	Nominal
Inhibit Ids Set	None	Nominal

TMONs enabled

68

(New) Nominal

This Week's Completed MODIS Activities:

Saturday, October 28, 2000

None

Sunday, October 29, 2000

None

Monday, October 30, 2000

Transition to B-Side Sequence

304/14:11:13	Real-Time	Turn off MODIS proc: MOD_ALL_OFF
304/14:12:50	Real-Time	Turn on MODIS with PS2 and CPB proc: MOD_TURN_ON('PS2','CPB')
304/14:15:35	Real-Time	Disable TMON #68 commanding, FIFO double write proc: FS1_EXEC_TMON_GRP_COM(0,68,68)
304/14:21:29	Real-Time	Transition to Science Mode on the B-side proc: MOD_SCI_TXTN_B
304/14:22:04	Real-Time	Enable TMON #68 commanding, FIFO double write proc: FS1_EXEC_TMON_GRP_COM(1,68,68)
304/14:24:43	Real-Time	Reset Formatter to Upload Mode proc: MOD_FR_RESET_UPLD
304/14:26:00	Real-Time	Load Formatter Patch #1 proc: MOD_MEM_LOAD('AM1_MPR_MODIS_FR_ANOMALY2',2,'N','DISABLE',1,1)
304/14:27:00	Real-Time	Load Formatter Patch #2 proc: MOD_MEM_LOAD('AM1_MPR_MODIS_FR_RECOVERY',64,'N','DISABLE',1,2)
304/14:27:35	Real-Time	Restart Formatter with ASTATE = 0 proc: MOD_FR_RESTART(0)
304/14:57:54 - 15:09:52		X-band Direct Broadcast service to Goddard (First look verifying collection of MODIS Science Data)
304/15:01:00	Ground-Proc	Set Yellow Limits for CP Status Word 6 (this produces a yellow limit if the Formatter Patch encounters an error not previously seen.) proc: MOD_ALARMS_CP_ST_06('ENABLE')
304/15:02:00	Ground-Proc	Set Yellow Limits for CP UART Reset (this produces a yellow limit if the CP loses communication with the Format Engine.) proc: MOD_ALARMS_URT_RST('ENABLE')

Tuesday, October 31, 2000

305/19:12:36	Real-Time	Set SMIR Itwk/Vdet to 79/110 proc: MOD_VDET_SWEEP('SMIR',0,0,79,110,0,0,1)
305/20:21:52	ATC	OA15: SDSM Open
305/22:00:45	ATC	OA16: SDSM Screened
305/23:00:00	ATC	Set Black Body Duty Cycle to 'FULL'
305/23:00:30	ATC	Set Black Body Temperature to '315K'

Wednesday, November 1, 2000

306/06:00:00	ATC	Set Black Body Duty Cycle to 'THIRD'
306/06:00:30	ATC	Set Black Body Temperature to '270K'

Thursday, November 2, 2000

307/04:00:30	ATC	Set Black Body Temperature to '290K'
307/19:34	Real-Time	Disable SRCA TMONs 66 and 67 processing As per B-Side Transition CAM discussion and submitted Terra Engineering Work Order. proc: FSI_EXEC_TMON_GRP_PROC(0,66,67)

Friday, November 3, 2000

None

This Week's Scheduled MODIS Activities Not Completed:

None

Upcoming MODIS Events:

Friday, November 3, 2000

308/21:44:49-22:42:20	ATC	OA-23: SRCA Full Spatial
-----------------------	-----	--------------------------

Saturday, November 4, 2000

309/06:14:00-06:31:00	ATC	Formatter Day Rate Science Collection during Nadir Ground Track Night. (3+ Granules)
309/21:39:13-21:41:44	ATC	OA-27: PV ECAL
309/21:44:13-21:48:44	ATC	OA-28: PC ECAL

Sunday, November 5, 2000

None

Monday, November 6, 2000

None

Tuesday, November 7, 2000
None

Wednesday, November 8, 2000
None

Thursday, November 9, 2000
None

Friday, November 10, 2000
None

Maneuvers:

Wednesday, November 15, 2000
The next MODIS Roll Maneuver is schedule for DOY 320 22:41:59 to 22:58:59 for a roll angle of -11.5506 degrees.

MODIS Anomalies:

Continued monitoring for formatter errors and loss of cooler margin.

Attached to this report is a spreadsheet (FR_anomaly_log_110200.xls) listing the times, addresses, formatter temperature, satellite ground track, and space craft day/night position for a select number of the formatter events that have occurred from DOY 256 to DOY 304. The final event count before the B-Side Transition was 2702. Due to the high number of recent events, not all details have been updated in the anomaly log.

General Instrument Comments:

MODIS is in Science Mode on the B-side with the SVD and NAD open, operating with the Formatter Resolution Flight Software Patches (FRFSP). No new events have been witnessed by the FRFSP since the B-Side Transition on DOY 304.

MODIS Telemetry Trends:

The Radiative Cooler intermediate stage temperature has slowly been increasing since approximately day 240. During this time the LWIR focal plane heater margin has been decreasing. The IOT is continuing to trend these telemetry mnemonics.

Non-MODIS Significant Events:

Wednesday, November 1, 2000

The Delta-V Maneuver was performed successfully.

No additional problems have been witnessed from the SFE-A since it was restarted on DOY 301.

As a reminder, the duration that the SFE-A was disabled: 300/14:05:02 to 301/14:06:19 (Just over 24 hours). NO Science Data will be available for this time period. All Science Data in this time frame has been permanently lost.

Limited Life Item Status:

SRCA 10W Lamp #1: 173.5 of 500 hours

SRCA 10W Lamp #2: 135.9 of 500 hours

SRCA 10W Lamp #3: 145.1 of 500 hours

SRCA 10W Lamp #4: 61.5 of 500 hours

SRCA 1W Lamp #1: 556.1 of 4000 hours

SRCA 1W Lamp #2: 276.3 of 4000 hours

Solar Diffuser Door: 1453 of 3022 Movements

Nadir Aperture Door: 532 of 1316 Movements

Space View Door: 437 of 1316 Movements